



Model 1.5



Loudspeaker

OWNER'S MANUAL

Thank you for your purchase of the NHT Model 1.5, our finest two-way loudspeaker. Please take a few minutes to read through this Owner's Manual prior to installing your new speakers. The information provided will help you to obtain maximum performance from your audio system. If you have questions or need assistance at any time during the installation or operation of your new speakers, please call your NHT Dealer or our Toll-Free Customer Hotline at:

1-800-NHT-9993

Please retain the Model 1.5's packaging to protect the speakers in the event that you move or transport them.

Model 1.5 Specifications

- **System Type:** 2-way, 10-liter acoustic suspension design, Focused Image Geometry
- **Driver Complement:** 6.5" long-throw polypropylene woofer, 1" fluid-cooled aluminum dome tweeter
- **Crossover:** 3.3KHz, 12dB/octave high-pass and low-pass
- **Response:** 53Hz - 25KHz, +/- 3dB
- **Sensitivity:** 85db (2.83V at 1M)
- **Impedance:** 8 ohms nominal, 6.2 ohms minimum
- **Recommended Amplifier Power:** 20W/ch minimum, 150W/ch maximum
- **Inputs:** 5-way binding posts
- **Weight:** 16 lbs. each
- **Dimensions:** 16.5"H x 7"W x 10.25"D
- **Finish:** High gloss black, mahogany or sycamore laminate

Specifications are subject to change without notice, in accordance with our policy of continuously upgrading the performance of our products.

■ Design

NHT loudspeakers are designed to deliver refined, musical sound from attractive and affordable packages. Our efforts are guided by the study of human hearing and are optimized for real-world use. Every NHT speaker undergoes rigorous testing and quality control at the factory to ensure years of listening pleasure.

Incorporating NHT's proprietary Focused Image Geometry design, the Model 1.5's custom-designed drivers and enclosure achieve a level of tonal neutrality and imaging precision unsurpassed at the price. Focused Image Geometry determines the 21-degree angle which defines the 1.5's unique cabinet, as well as the sound radiation pattern of the system. The irregular enclosure shape greatly increases the ratio of direct to reverberant sound, reducing side-wall reflections and concentrating sound energy in the listening area. The exact angles at which the sound from the speakers reaches the ears of centrally located listeners is calculated to create what is known in acoustics as minimum "inter-aural cross-correlation." This technique allows the Model 1.5 to properly recreate the natural acoustic ambiance and perspective contained in good recordings. In addition, the radiating axes of the left and right speakers are crossed, providing "time-intensity trading," so that the stereo image remains focused and stabilized for a wider range of listening positions. Finally, the cabinet shape also reduces the formation of internal standing waves, resulting in smoother midrange response.

Focused Image Geometry is the heart of NHT's successful line of high-performance audiophile loudspeakers. Borrowing technologies from NHT's acclaimed flagship Model 3.3, the Model 1.5 employs custom-designed European drivers, including an offset aluminum dome tweeter that boasts extremely smooth response, even at high listening levels. The Model 1.5 features a 6.5" long-throw woofer that is the result of extensive in-house development and is custom-manufactured for precise rolloff and radiation characteristics.

With the increasing popularity of home theater systems, many audio / video enthusiasts are building combined entertainment systems for both music and movies. When the Model 1.5 is used in a home theater system, be sure to augment it with timbre-matched speakers to ensure a seamless soundfield. The NHT AudioCenter-1 is the appropriate matching center channel speaker, and a second pair of Model 1.5's is the ideal match for the surround channels. Alternately, the NHT HDP-2 hybrid dipole can be used as a surround speaker in rooms where the couch is against the rear wall.

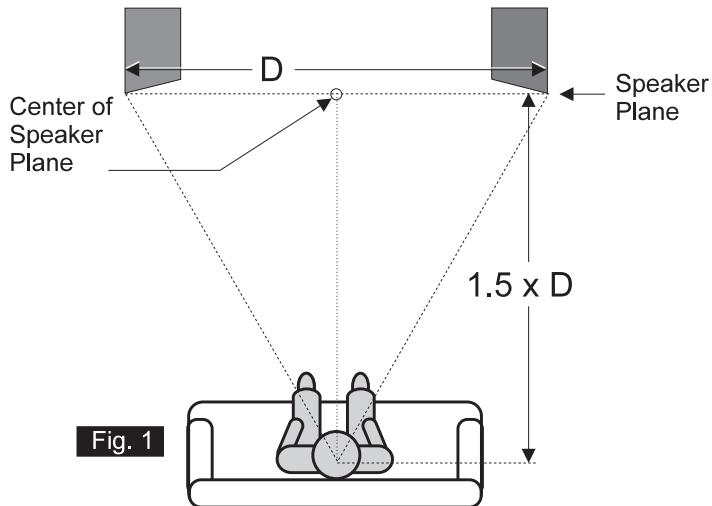


Fig. 1

■ Placement

The compact size and angled shape of the Model 1.5 allow it to be placed on speaker stands or on shelves. The Model 1.5 is designed for indoor use only. As the Model 1.5 is not a magnetically shielded loudspeaker, do not place it closer than 18 inches from a television. Unshielded magnets placed in close proximity to a television screen can cause discoloration of the picture. If you notice picture discoloration, move the speakers away from the TV until the problem disappears.

The most impressive performance benefit of Focused Image Geometry is spectacular imaging and an expansive soundstage. To achieve this in your home, we recommend that the Model 1.5's are placed on rigid speaker stands, approximately 22 inches high, situated at least 12 inches from the rear wall (behind the speakers) and at least 30 inches from the side walls. For smoothest response, the distance from the side walls should be different than the distance from the rear wall. Preferably, use spikes or cones to firmly couple the speaker to the stand and the stand to the floor. Optionally, the Model 1.5's may be placed on a shelf or in a cabinet, however this placement will have a detrimental effect on the sound. For best results, place the speakers flush with the front, and not pushed back on the shelf.

The 1.5's should be placed as symmetrically as possible, with their backs parallel to the rear wall and the drivers facing the listening area without obstruction from furniture. The tweeters should be at equal height and at approximately ear level to ensure accurate response. Arrange the speakers so that the distance between the listener and the center of the speaker plane is 1.5 times the distance between the two speakers (Fig.1). This configuration puts the listener in the center of the stereo image.

Experimentation is the key to finding the best arrangement in your particular listening environment. Be patient, have fun, and remember that small changes in speaker position can sometimes have a significant effect on the sound. For example, moving the speakers nearer to a room boundary (walls, corners) will tend to increase their bass output, but may result in "boomy" or "muddy" sound. Conversely, situating the speakers farther away from room boundaries will tend to decrease their bass output, but may result in greater articulation and better imaging.

In addition, room furnishings play an important role in absorbing and reflecting soundwaves. Midrange and high frequencies in particular will be absorbed by soft furnishings such as sofas, carpets and curtains. A large number of these soft furnishings will dull the sound, while a "live" room with few furnishings will brighten the sound. If you are willing to spend some time fine-tuning the performance of your system, you will enjoy the benefits for years to come.

■ Connections

Before connecting speakers to your system, it is important that you turn off the power to your amplifier / receiver to avoid damage to the equipment.

The Model 1.5 loudspeaker system is compatible with virtually all quality amplifiers. Proper wiring of the speakers is essential to good sound. At a minimum, 16AWG wire is recommended for runs of 10 feet or less, with heavier special purpose speaker wire used for longer runs. For specialty wire considerations, consult your local authorized NHT retailer. For best results, use equal length runs of wire for the left and right speakers. Prepare your speaker wire by stripping 1/4" to 3/8" of insulation from the ends and twisting the exposed wire strands tightly. The five-way binding posts on the back of the speaker will accept raw wire, banana plugs or spade plugs. Tighten the binding posts by hand, as pliers can strip or break them.

Be sure to wire both the left and right speakers "in-phase." That is, the Positive (red) terminal on the amplifier output must be connected to the corresponding Positive (red) terminal on the speaker. Likewise with the Negative (black) terminals. All speaker wires have some sort of marking along one or both conductors to help you make the correct connections. Incorrect speaker phase is indicated by weak bass and the lack of a well-defined stereo image.

To minimize noise pickup, segregate cables by function. Do not run low level signal cables parallel to power cables, speaker cables, or digital cables. Also, do not run speaker cables or digital cables parallel to power cords or parallel to each other. If different types of cables are placed near each other at some place in your system, separate them by the maximum practical distance and cross them at right angles where they meet. Do not twist or tie AC power cords with speaker cables.

■ Operation

The Model 1.5 was designed to handle a wide range of listening levels, but every speaker has limits. It is important to use common sense and listen for signs of possible distress from the speakers. Underpowered amplifiers are most often the cause of speaker damage. For example, a 60-watt amplifier runs out of power when called upon to produce more than 60 watts, and the resulting distortion can damage the speaker. If you tend to listen at high volume levels, more powerful amplifiers are preferable because they are less likely to run out of power.

Noticeable distortion or harsh breakup is an indication that either your amplifier or your speakers are running beyond their capacity, and the volume should be decreased. If you can feel any heat emanating from the woofer or tweeter, reduce the level immediately. Speaker damage most often occurs from sustained high volume levels, not from transient sounds or brief musical peaks. Excessive boosting of bass, treble or equalizer controls can worsen the problem, and is not recommended.

■ Maintenance

Your speakers require minimal maintenance under normal use. The cabinet may be cleaned using a damp cloth or a mild, non-abrasive cleaner. To clean the grille, first remove it from the speaker, then brush lightly with a soft brush or use a vacuum on its lowest setting. Do not expose the speaker to direct sunlight, high temperatures, or moisture. Do not attempt to clean the actual drivers.

Limited Warranty Valid Only in the U.S.A.

Warranty Period

For the period of 5 years for parts and 5 years for labor from date of original purchase (the warranty period) from an authorized NHT dealer, Now Hear This (NHT) warrants that if our product fails to function properly under normal use due to a manufacturing defect when installed and operated according to the owner's manual instructions enclosed with the unit, it will be repaired or replaced with a unit of comparable value at the option of NHT without charge to you for parts or actual repair work. Parts supplied under this warranty may be new or rebuilt at the option of NHT.

What's Not Covered

This warranty does not cover any product which is used in any trade or business, or in an industrial or commercial application.

This warranty does not cover the cabinet or any appearance item, or any damage caused to the product resulting from: alterations, modifications not authorized in writing by NHT, accident, misuse or abuse, damage due to lightning or power surges, or being subjected to power in excess of the speaker's published power rating.

This warranty does not cover the cost of parts which would otherwise be provided without charge under this warranty, obtained from any source other than an authorized NHT service location. This warranty does not cover defects or damage caused by the use of unauthorized parts or labor or from improper maintenance.

Altered, defaced or removed serial numbers void this warranty.

Your Rights

The liability of NHT will be limited to the purchase price of the product, and NHT will not be liable for incidental or consequential damages. NHT limits its obligations under any implied warranties under state laws to a period not exceeding the warranty period. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. The above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

To Obtain Service

NHT has appointed a number of authorized service companies throughout the USA should your product ever require service. To receive warranty service, you will need to present your sales receipt showing place and date of original owner's transaction.

To find the name and address of the nearest authorized NHT service location, call **800-NHT-9993** or write: **NHT 6400 Goodyear Road, Benicia, CA 94510**

Keep this warranty with your sales receipt. Record date and place of purchase for future reference.